

WATER PERMIT NO. 2259-2

Phone: 567-3374

Name of Applicant: ROSE RANCH, BOB ROSE

Post Office Address: SR 68, Box 385, Hayes SD 57537

Amount of Water Claimed: ³⁷68 ac-ft Total Acres: _____

Source of Water Supply: runoff

Water to be used for: livestock & erosion control County: Stanley

About 17 miles north of Hayes

PRIORITY Date Received: 2-18-93 Fee: \$150 Remarks: _____

Corrected Application Received: _____ Period of Annual Use: May 1 - Oct 31

WATER QUALITY APPROVAL RECEIVED: _____ APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES _____ NO _____ REMARKS: _____

Diversion Point: SW 1/4 NE 1/4 Sec 34-T8N-R26E

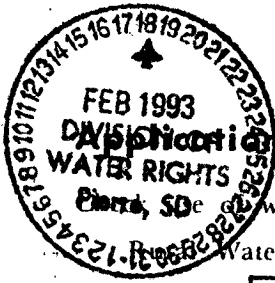
Land to be Irrigated: _____

Well Log: Driller: _____ Licensed YES _____ NO _____

Depth of Well: _____ REMARKS: _____

Type of Map: aerial PREPARED BY: Kevin Paulsen Reviewed and the Number

Assigned on: 2-18-93 By: Karen Schlaak



No. 2259-2 Hydrologic Unit 10130105
 Map No. _____ Basin Missouri River
 Newspaper Capital Journal, PO Box 878

Application For Permit To Appropriate Water Within The State Of South Dakota

Source of water: Industrial ☐ Commercial ☐ Municipal ☐ Other Common Distribution System ☐
 Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
 Domestic ☐ (above 18gpm) Other ☒ Livestock + erosion control

Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐

☐ Amend Permit No. _____ with old priority date retained

Change diversion point(s) ☐ Add diversion point(s) ☐ Other ☐ _____

☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____

☐ Construction to use water reserved by Future Use Permit No. _____

1. Name of Applicant Rose Ranch Bob Rose Phone No. 567-3374

Post Office Address SR 68 Box 385 Hayes State SD 57537
(Street, RR or Box) (City) Zip Code

2. Amount of water claimed (c.f.s) 37 ~~100~~ Ac Ft

3. Source of water supply runoff

4. Location of point of diversion SW 1/4 NE 1/4 of Sec. 34 T.8N R26E

County Stanley

5. Counties where water will be used Stanley

6. Annual period during which water is to be used ~~May - October~~ Jan 1 - Dec 31

7. Give a brief description of proposed project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

A grade stabilization structure is to be constructed to provide erosion control + provide livestock water. See attached SCS design for engineering information needed.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA)
 County of Hughes)^{ss}

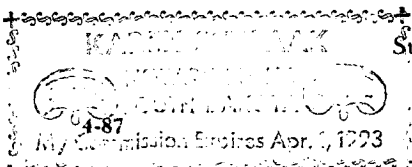
I, Robert Rose

the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Signed Rose Ranch by Robert Rose

Subscribed and sworn to before me this 18th day of February 19 93

Karen Schlaak
 Notary Public



Supplemental Information

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack Thickness _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On applicants property _____ On property owned by others _____

2. Dugout Information Estimates

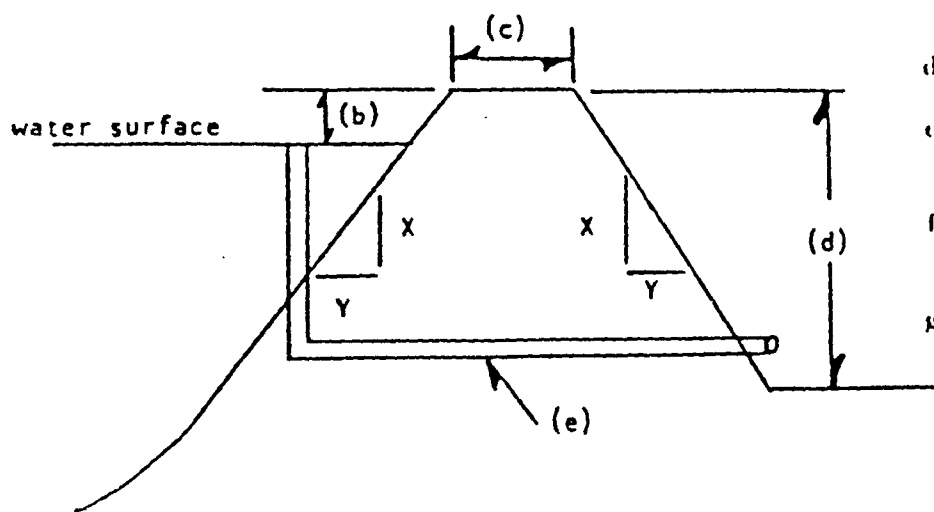
- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam please give their name and address

Kevin Paulsen, Soil Cons. Service
316 So. Coteau, Pierre, SD



- b) Freeboard 3.0'
- c) Crest Width 12.0
 Crest Length 413.0'
- d) Height ~~16.7~~ 19'
- e) Primary Outlet Capacity 42" Riser
 If Pipe, diameter 30" Barrel
- f) Secondary Spillway Capacity 4.6 CFS
 Spillway width 20' Bottom
- g) X & Y Slope
 Upstream 3:1
 Downstream 3:1
- Surface Area of Impoundment 6.5
- Storage ~~18~~ 37 acre feet
- Drainage area above dam 825 Ac.

Signature of Applicant _____

**SOUTH DAKOTA
WATER PERMIT NO. 2259-2**

Date of first receipt of application February 18, 1993.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2259-2 to Rose Ranch, Bob Rose, SR 68, Box 385, Hayes SD 57537 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2259-2 impounds 37 acre-feet of water by constructing a dam. The dam site is to be located in the SW 1/4 NE 1/4 Section 34 with water impounded in the SW 1/4 NE 1/4, N 1/2 SE 1/4 Section 34; all in T8N-R26E.
2. The water appropriated shall be used for the purpose of supplying livestock water and erosion control and may not exceed the amount of water needed for beneficial use for domestic purposes.
3. The water is to be used during the following described annual period: January 1 - December 31.
4. The date of approval of Permit No. 2259-2 is April 14, 1993.
5. The date from which applicant may claim right is February 18, 1993.
6. One-fifth of the construction is to be completed on or before October 14, 1995.
7. All construction is to be completed on or before April 14, 1998.
8. Water is to be put to beneficial use on or before April 14, 2002.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.
2. Approval of Water Permit No. 2259-2 authorizes storage of up to 37 acre-feet annually.

WATER MANAGEMENT BOARD

By: _____

John Hatch
John Hatch, Chief Engineer
Water Rights Division
Department of Environment and
Natural Resources

MAY 19 1993

date

RECEIPT

413644

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____ February 18, 19 93

RECEIVED OF Robert Rose, 1227 E Dakota, Pierre, SD 57501

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>2259-2</u> to Appropriate Water, to construct and to put water to beneficial use _____	150	00
Fee for Application for Permit No. _____ to Appropriate Water, for Future Use _____		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	150 00

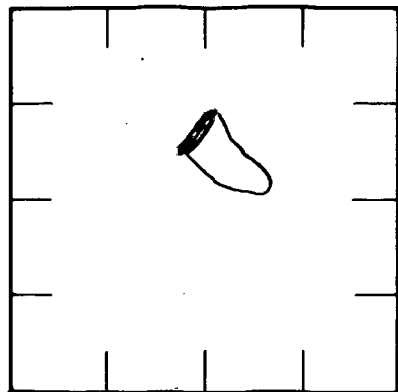
By *John Hatch*
Chief Engineer

STRUCTURE DATA

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	EMERG. SPLWY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	AC. FT.	25-YR.	C. F. S.	FEET	ACRES	AC. FT.	AC. FT.
825	30.3	402	4.6	12	6.5	10.0	48

Per ft. width

30" vinyl coated double
riveted caulked seam
or spiral pipe.



sec. 34 T. 8N R. 26E
Stanley County

LOCATION

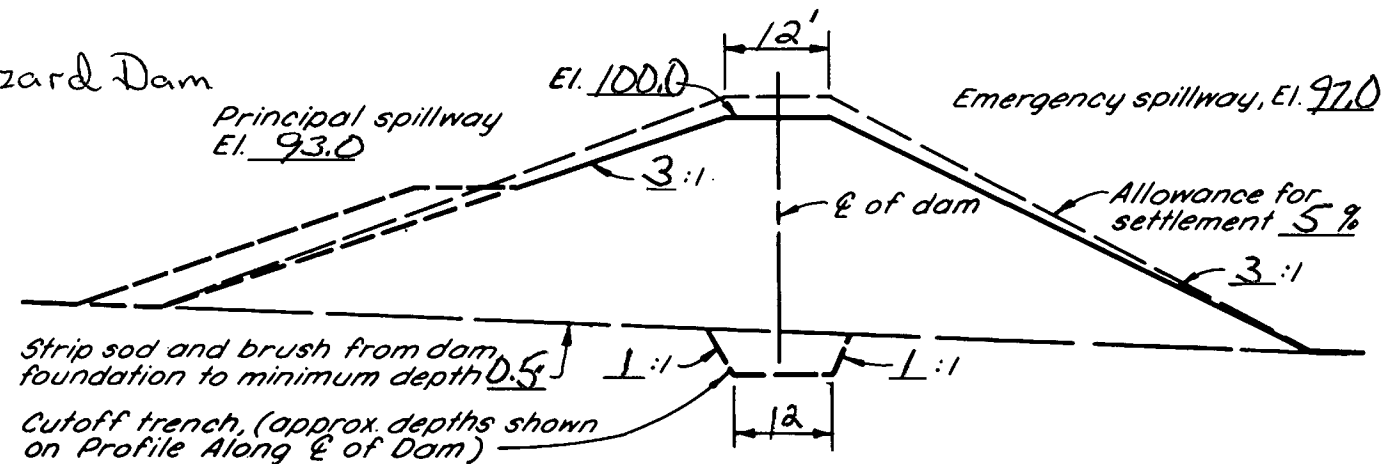
TABLE OF QUANTITIES

[illegible]

E.S.
70'
wide
Bott

Pond
Area

Class "A" Hazard Dam



TYPICAL CROSS SECTION OF DAM

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

SD-15 Corrugated Metal Pipe
Conduit (Pipe will have caulked
seams, double riveted or spiral
with corrugated end rolled for
24" bands to make a water tight
fit.)

EARTH DAM

OPERATOR: Rose Ranch
CONSERVATION DISTRICT: Stanley Co.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

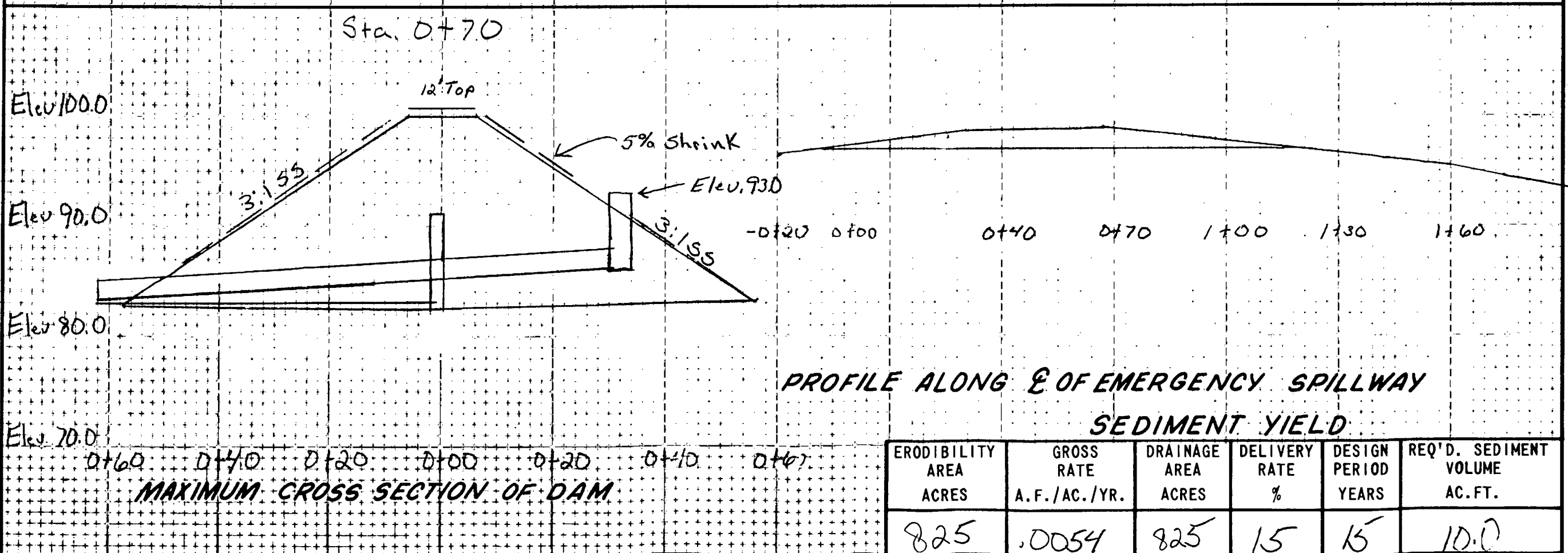
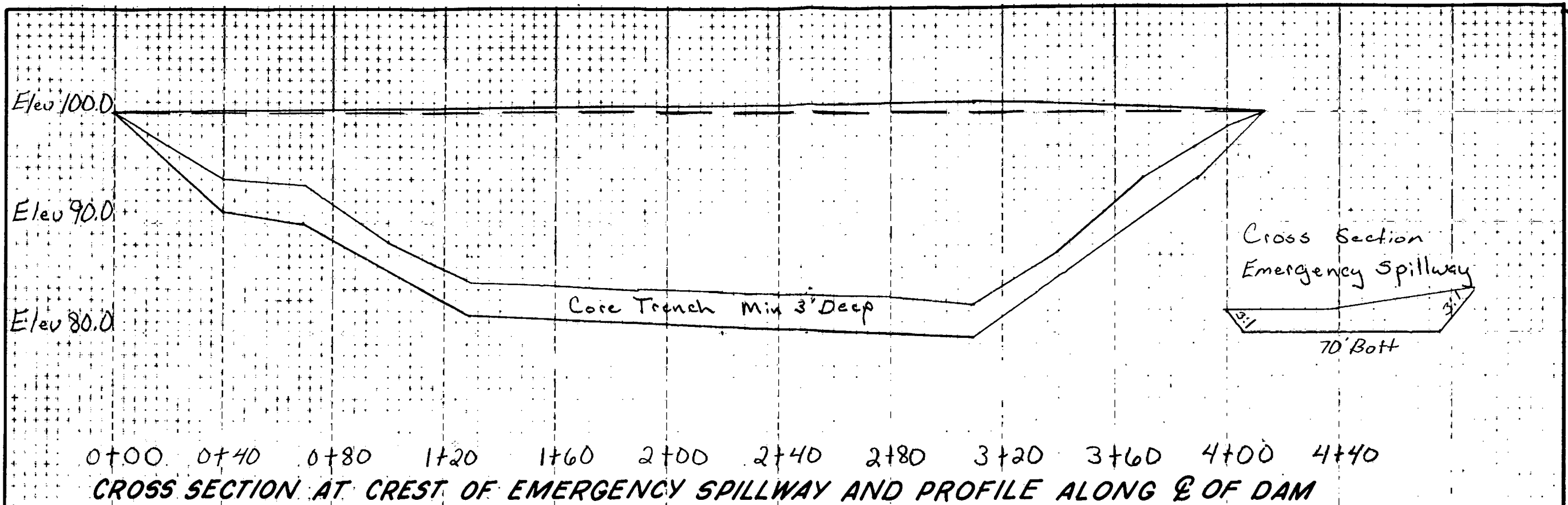
Designed. <u>K. Paulsen</u>	Date <u>5/92</u>	Approved <u>[Signature]</u>
Drawn. <u>K. Paulsen</u>	<u>5/92</u>	Title <u>[Signature]</u>
Traced. _____		Title _____
Checked <u>DK</u>		Sheet _____ Drawing No. _____

SKETCH PLAN OF DAM AND RESERVOIR AREA

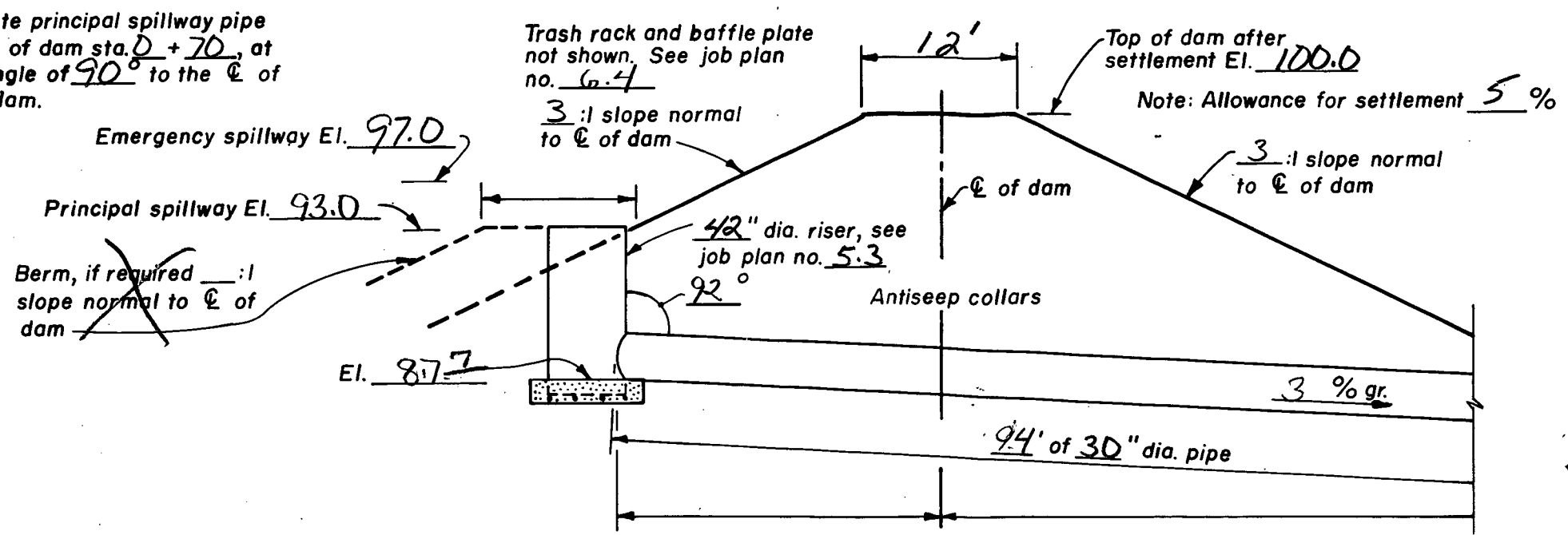
Approximate scale $1'' = 100'$

REFERENCE: GUIDE PLAN NO. 1.0

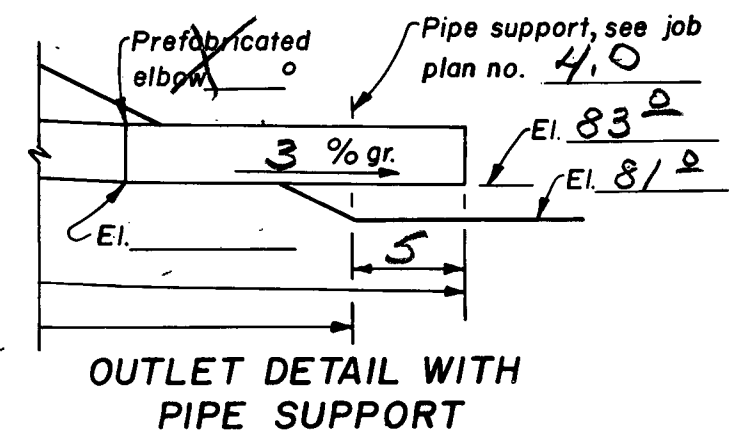
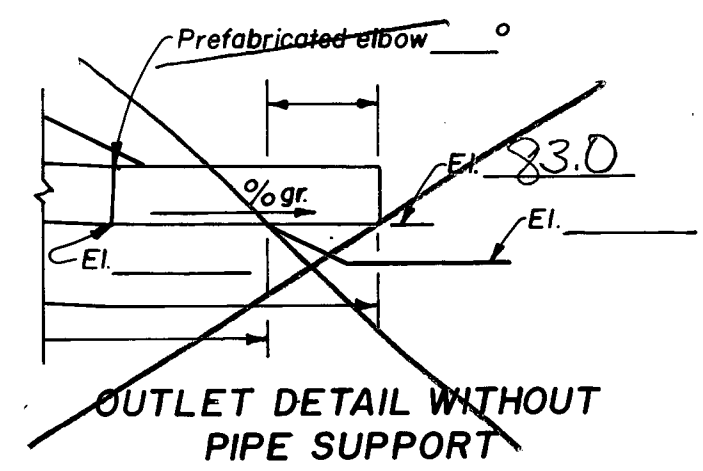
JOB PLAN NO. 1.0



Locate principal spillway pipe at $\mathcal{C}$ of dam sta. $0 + 70$, at an angle of 90° to the $\mathcal{C}$ of the dam.



CROSS SECTION OF DAM ALONG $\mathcal{C}$ OF PRINCIPAL SPILLWAY
(Not to scale)



SPECIFICATION NOTES

1. ELBOW, IF REQUIRED, MAY BE FABRICATED BY CONTINUOUS WELDING SEPERATE PIPE SECTIONS OR BY FABRICATING A CONTINUOUS WELDED JOINT ON THE UPSTREAM END OF LAST SECTION OF PIPE.
2. PIPE WALL THICKNESS SHALL BE 16 GAGE OR 0.067 INCHES.
30" spiral or double riveted
and caulked seams vinyl
coated.
3. Use 2 20ft section of
CMP on outlet

TABLE OF QUANTITIES

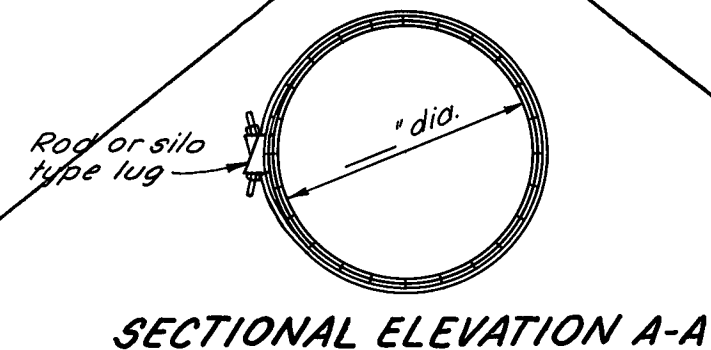
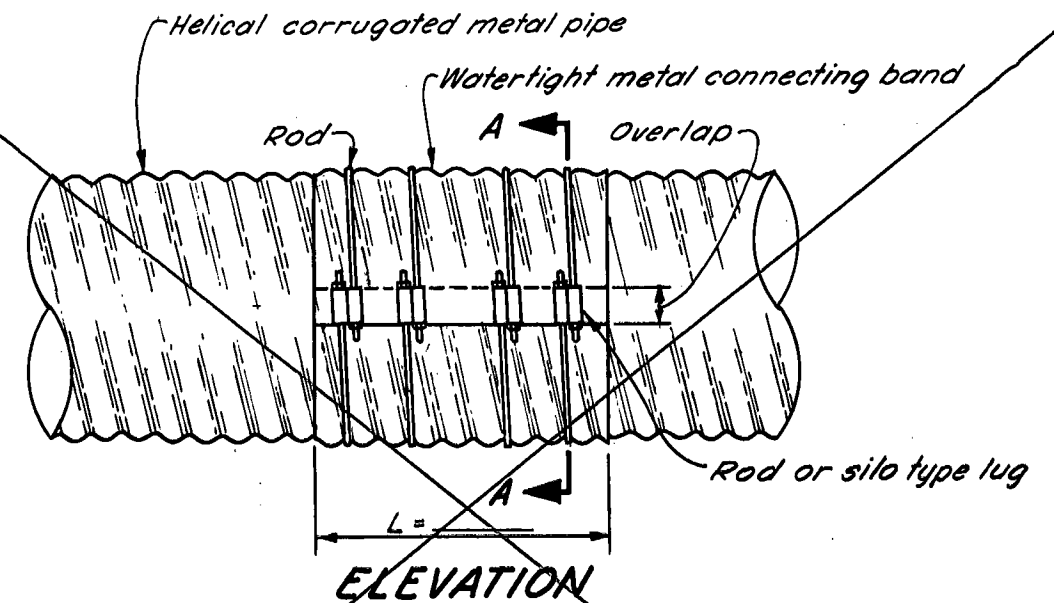
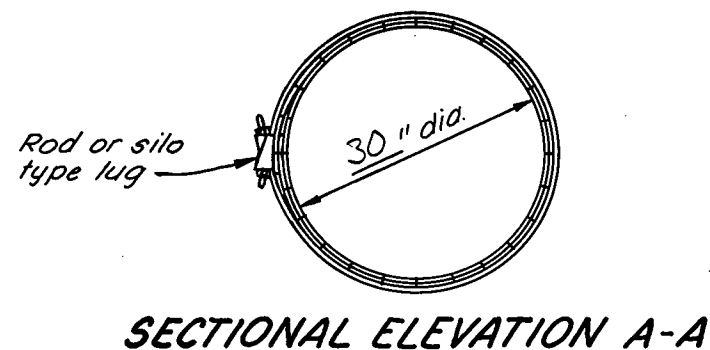
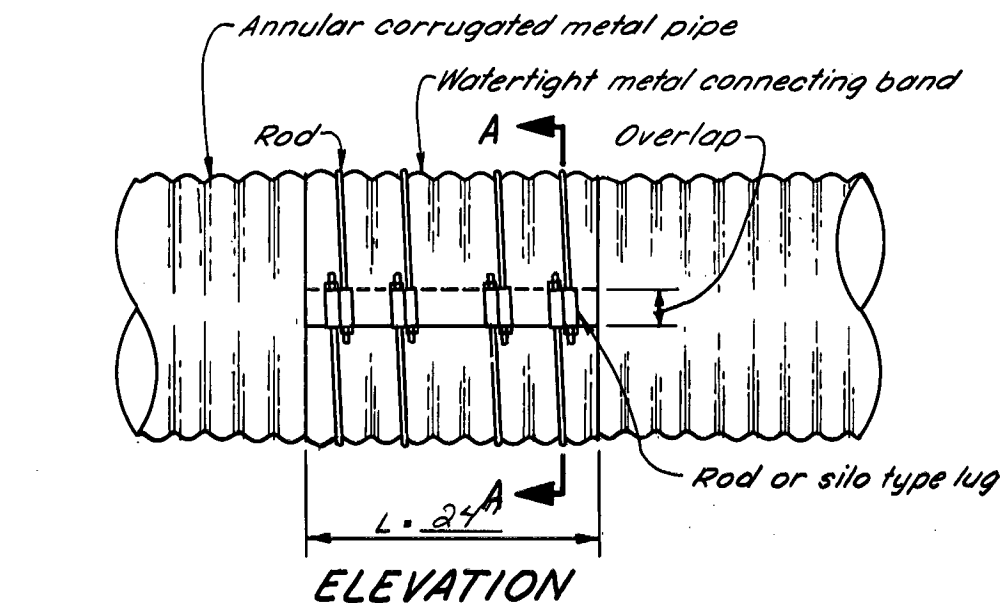
ITEM	UNIT	QUANTITY
30" CMP Vinyl Coated	Ft	94
30" Connector Band (24" width)	Ea	5
42" CMP Vinyl Coated	Ft	7
Concrete	Cu. Yd	1.2
Sand	Cu. Yd	20.3
4" Dia. Non perforated pipe	Ft.	60
4" Dia. perforated pipe	Ft.	16.5
Timber pipe support	Ea	1

Sec. 34, T. 8N, R. 26E
Stanley County
LOCATION

**CORRUGATED METAL PIPE
DROP INLET PRINCIPAL SPILLWAY**

APPLICABLE STANDARD S.C.S. SPECIFICATIONS
SD-15 Corrugated Metal Pipe
Conduits

OPERATOR <u>Rose Ranch</u>	
CONSERVATION DISTRICT <u>Stanley Co.</u>	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed <u>K. Paulsen 5-92</u>	Date <u>5-92</u>
Drawn <u>K. Paulsen 5-92</u>	Approved by _____
Traced <u>D.K.</u>	Title _____
Checked _____	Sheet _____
	Drawing No. _____



DIMENSIONS AND QUANTITIES

PIPE DIA. INCHES	MINIMUM "L" INCHES	APPROX. OVERLAP INCHES	NUMBER OF RODS & LUGS	MINIMUM ROD DIA. IN.	NEOPRENE GASKET WIDTH INCHES	ASPHALT MASTIC GAL.
6-18	12	2	2	1/2	12	1/2
21-30	24	3	4	1/2	12	1 1/2
36-48	24	6	4	1/2	12	2

NOTES:

1. WATERTIGHTNESS WILL BE OBTAINED BY USE OF (1) 3/8" THICK NEOPRENE GASKET (WIDTH AS SHOWN) OR (2) ASPHALT MASTIC SEALING MATERIAL TO COVER FULL WIDTH OF BAND.
2. CROSS OUT BAND AND QUANTITIES NOT APPLICABLE.
If spiral pipe is used, reroll the ends to accept standard 2 ft band.

WATERTIGHT CONNECTING BAND FOR ANNULAR AND HELICAL CORRUGATED METAL PIPE

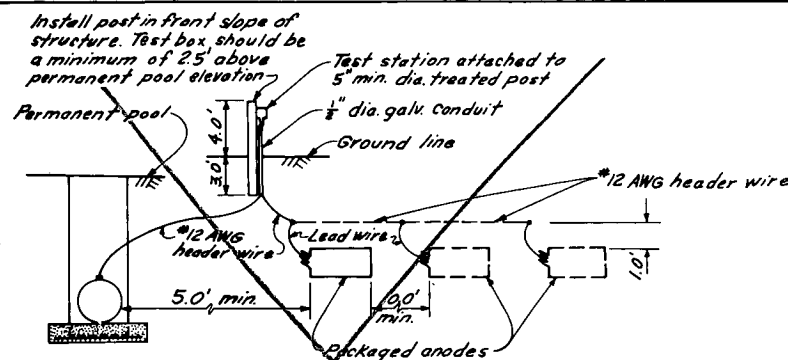
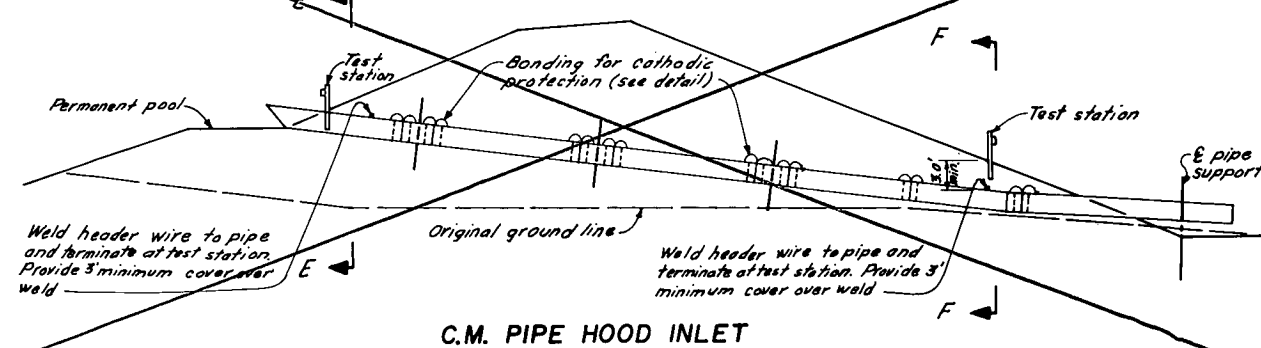
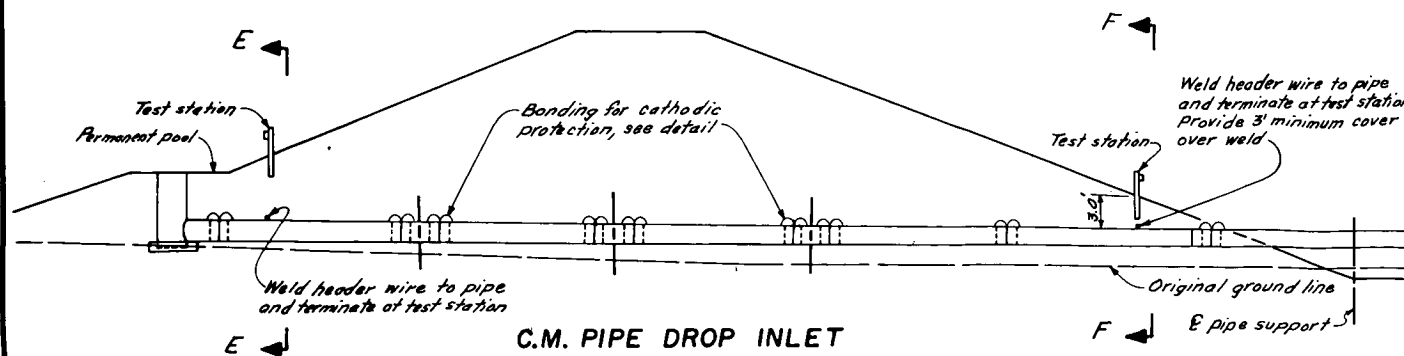
OPERATOR: <u>Rose Ranch</u>	
CONSERVATION DISTRICT: <u>Stanley Co.</u>	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed <u>K. Paulsen</u>	Date <u>5-92</u>
Drawn _____	Approved by _____
Traced <u>1</u>	Title _____
Checked <u>DK</u>	Title _____
Sheet _____	Drawing No. _____
No _____	of _____

JOB PLAN NO. 3.0

5, N-29, 073.30

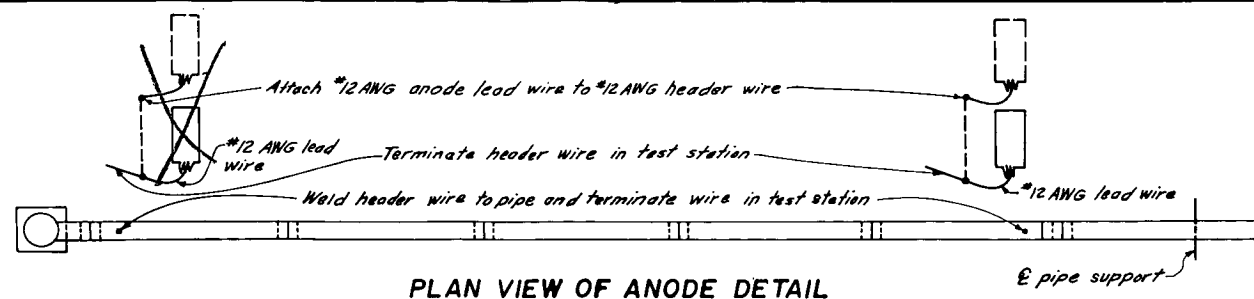
Note: 1 piece anti-seep collars are shown, see note 6.

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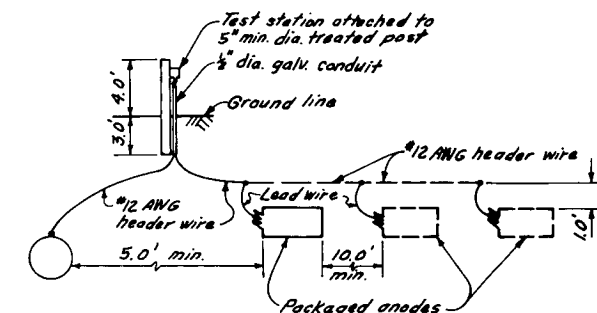


PACKAGED MAGNESIUM ANODES REQUIRED (Upstream)

SIZE NO. REQ'D
SECTION E-E



PLAN VIEW OF ANODE DETAIL



PACKAGED MAGNESIUM ANODES REQUIRED (Downstream)

SIZE NO. REQ'D
17 3
SECTION F-F

TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY
5" DIA. 7' LONG PRESSURE TREATED POST	EACH	1
1/2" DIA. 6' LONG GALV. STEEL CONDUIT	EACH	1
WEATHERPROOF BOX	EACH	1
PACKAGED MAGNESIUM ANODES	EACH	3
# 6 AWG JOINT BRIDGING CABLE	LIN. FT.	50
# 12 AWG HEADER WIRE	LIN. FT.	50

JOINT BRIDGING CABLE LENGTHS

PIPE DIAMETER	CABLES			
	A	QUANTITY	B*	QUANTITY
12	2-0	2	1-0	1
15	2-0	2	1-3	1
18	2-0	2	1-6	1
21	2-0	2	1-9	1
24	2-0	2	2-0	1
30	2-0	2	2-6	1
36	2-0	2	3-0	1
42	2-0	2	3-6	1
48	2-0	2	4-0	1
54	2-0	2	4-6	1
60	2-0	2	5-3	1

* B CABLES ARE NOT REQUIRED WITH ONE PIECE BANDS

NOTES:

- LOCATE ANODES IN NATURAL SOIL WITHIN 200' OF TEST STATION AS DIRECTED BY THE ENGINEER.
- PIPE WELD CONNECTION AREAS SHALL BE ROUGHENED AND CLEANED TO EXPOSE THE BASE METAL TO PROVIDE GOOD CONDUCTIVITY.
- TERMINAL WELDS ON BANDS SHALL BE PLACED OUTSIDE OF BAND LAP AREA TO AVOID INTERFERENCE WITH LAP.
- AFTER WELDING, ALL EXPOSED METAL SHALL BE COATED AS SPECIFIED FOR PATCHING DAMAGED PIPE COATING.
- THE POWDER WELDING CARTRIDGE SHALL BE EQUAL TO OR BETTER THAN CADWELD CARTRIDGE CA 15+.
- WHEN TWO PIECE ANTI-SEEP COLLARS ARE USED, WELD A LENGTH OF BRIDGING CABLE TO UPPER AND LOWER PIECES AND FROM PIPE TO COLLAR.
- BACKFILL AROUND ANODE WITH WELL TAMPED, MOIST CL MATERIAL.
- MINIMUM TRENCH WIDTH FOR ANODES SHALL BE 2'.
- ANODE MAY BE LOCATED EITHER DOWNSTREAM OR UPSTREAM OR BOTH LOCATIONS.
- CROSS OUT VIEWS NOT APPLICABLE.

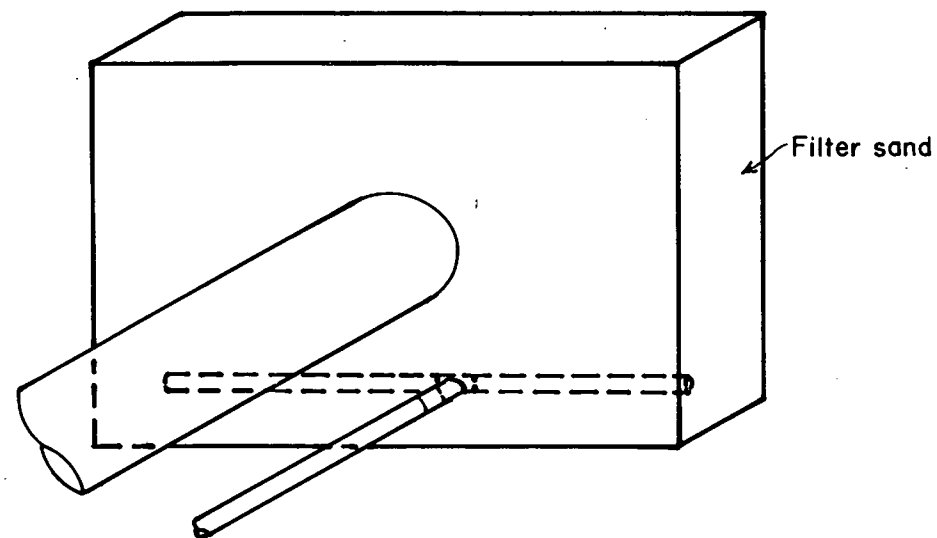
CATHODIC PROTECTION SYSTEM

OPERATOR: Rose Ranch
CONSERVATION DISTRICT: Stanley Co.

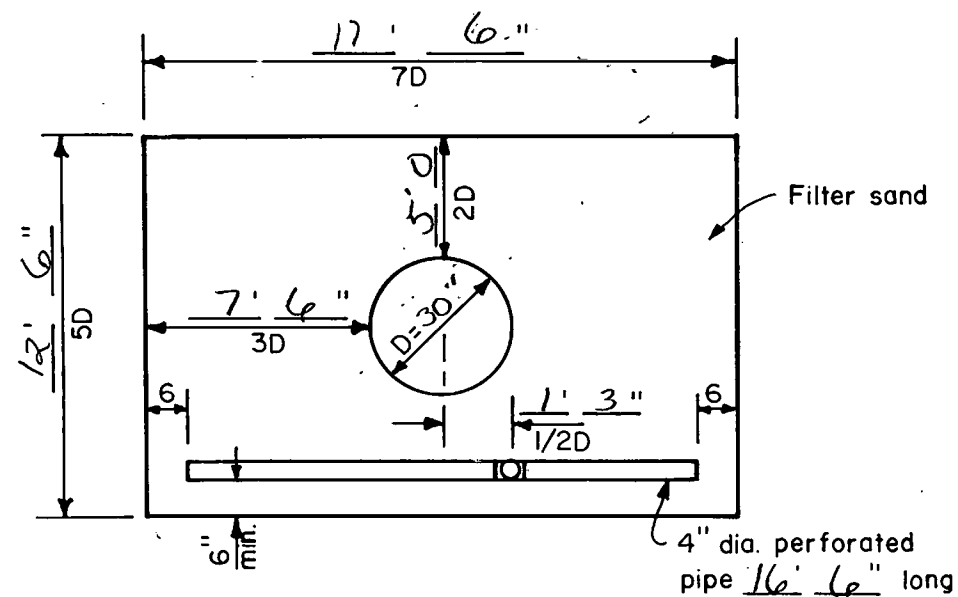
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed: K. Paulsen Date: 5-92 Approved by: _____
Drawn: _____ Title: _____
Traced: _____ Sheet: _____
Checked: DK No. _____ Drawing No. _____
of _____

JOB PLAN NO. 3.6



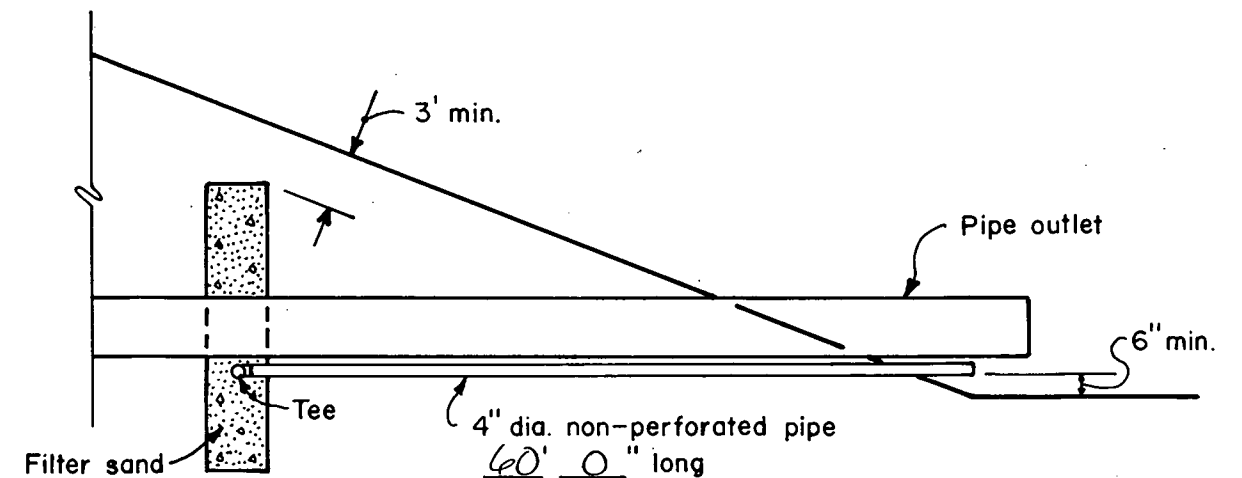
ISOMETRIC VIEW



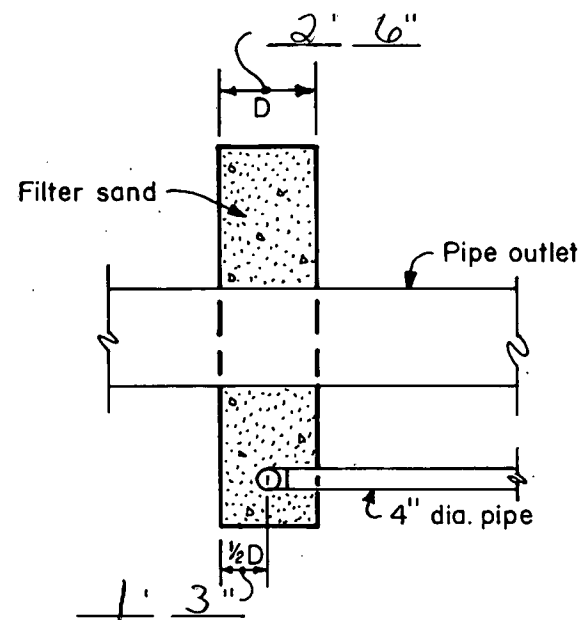
UPSTREAM VIEW

NOTE:

1. THE 4" DIA. PIPE SHALL BE ASTM D1785, SCHEDULE 40, PVC.
2. PROVIDE AN ANIMAL GUARD ON DRAIN OUTLET PIPE. DRILL 2, 1/2" DIA. HOLES, ON $\varnothing$ 6" FROM END OF PIPE AND PLACE A 3/8" DIA., 5 1/2" LONG GALVANIZED STEEL BOLT THRU THEM AND SECURE WITH A NUT (PLACE BOLT HORIZONTAL).



OUTLET DETAIL



SIDE VIEW

FILTER GRADATION

SIEVE SIZE	PERCENT PASSING
3/8"	100
4	95-100
8	80-100
16	50-85
30	25-60
50	10-30
100	2-10

Sec. 34, T. 8N, R. 26E
Stanley County
 LOCATION

SAND ANTISEEP COLLAR

OPERATOR <u>Rose Ranch</u>	
CONSERVATION DISTRICT <u>Stanley</u>	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed <u>K. Paulsen</u> <u>5/92</u>	Approved by _____
Drawn _____	Title _____
Traced _____	Sheet _____
Checked <u>DK</u>	Drawing No. _____

JOB PLAN NO. 3.8



SECTIONAL ELEVATION A-A

ITEM	LENGTH FOR <u>30"</u> DIA. C.M. PIPE	UNIT	QUANTITY
PRESSURE TREATED POLE <u>10"</u> DIA.	<u>10'</u>	EACH	<u>2</u>
2" X 12" PRESSURE TREATED LUMBER	<u>5'</u>	EACH	<u>2</u>
2" X 6" PRESSURE TREATED LUMBER	<u>5'</u>	EACH	<u>2</u>
2" X 12" PRESSURE TREATED LUMBER	<u>2'</u>	EACH	<u>2</u>
2" X 6" PRESSURE TREATED LUMBER	<u>2'</u>	EACH	<u>2</u>
1/2" DIA. MACHINE BOLTS WITH NUTS	<u>1-4</u>	EACH	<u>10</u>
1/2" DIA. WASHERS		EACH	<u>20</u>

1. HAND OR MACHINE TAMP BACKFILL THOROUGHLY
AROUND FOOTINGS AND COLUMNS. _____

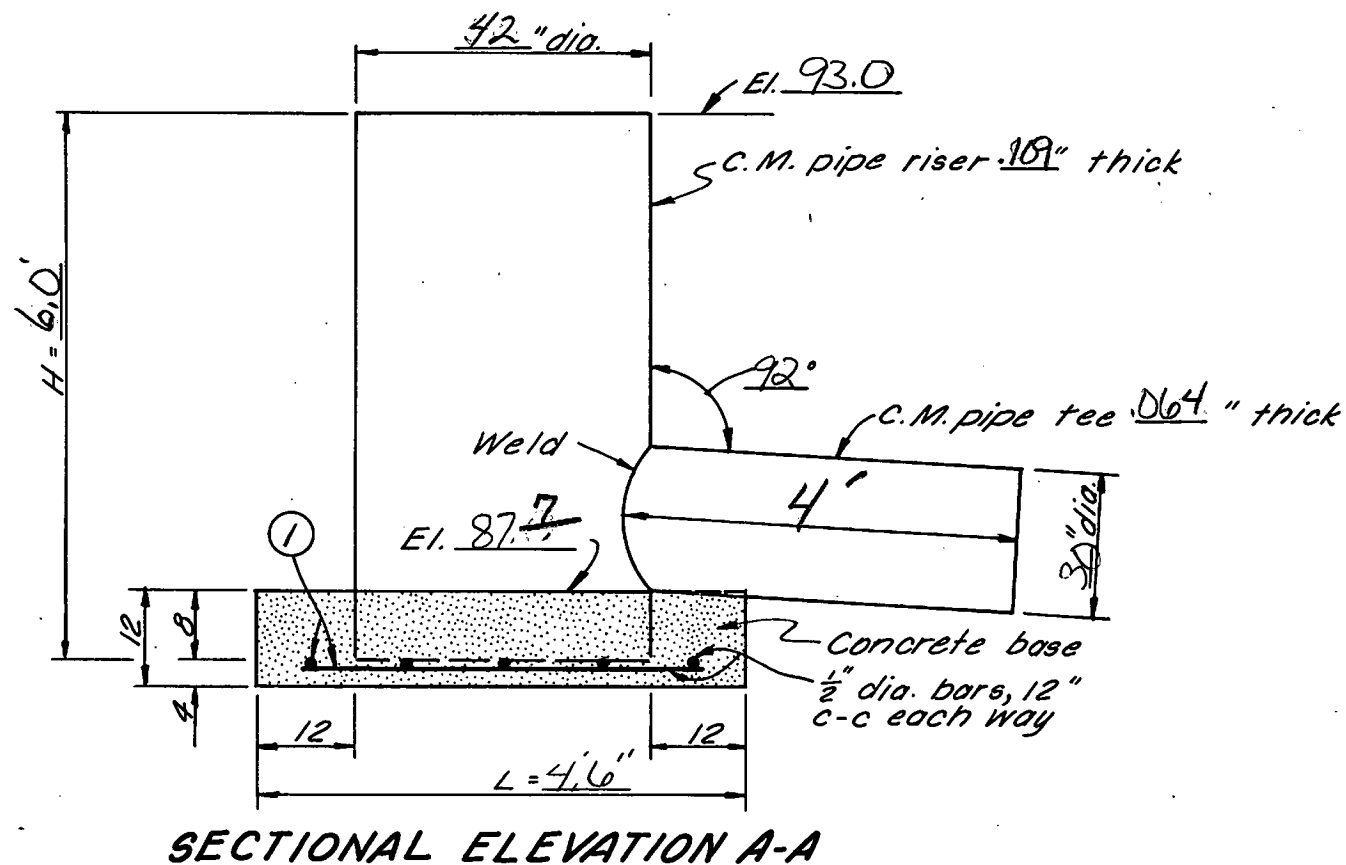
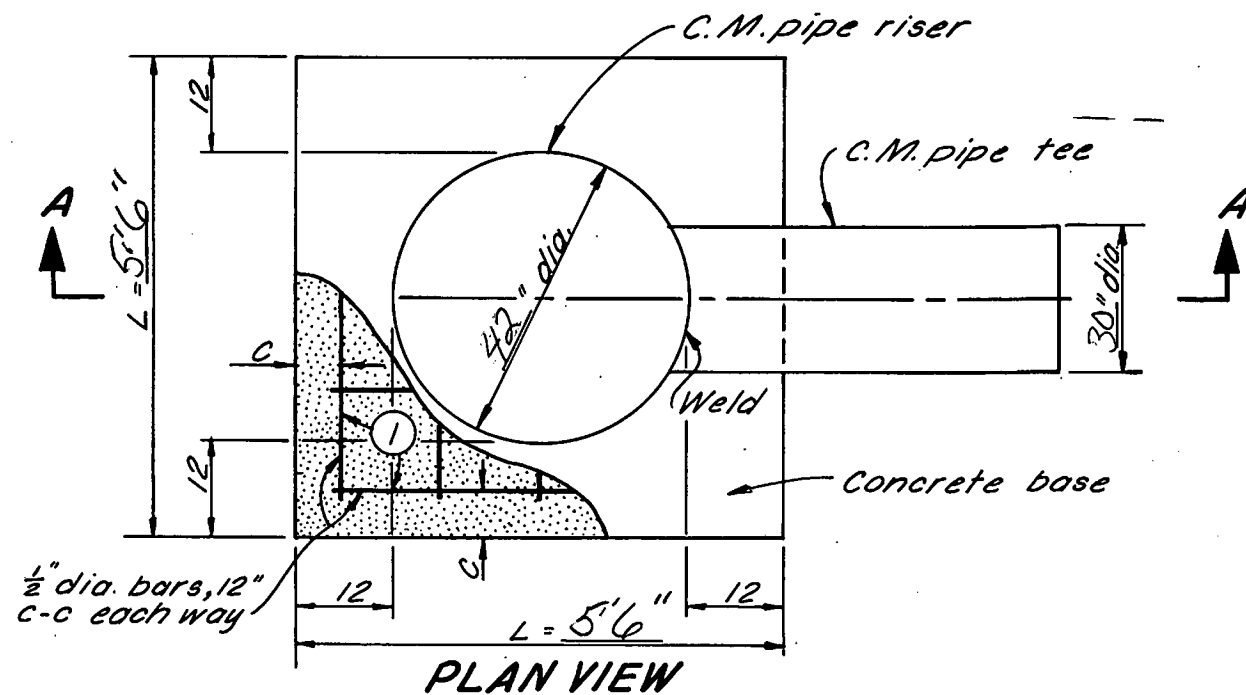
TIMBER PIPE SUPPORT

OPERATOR: Rose Rensch

CONSERVATION DISTRICT: Stanley

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed..... Drawn..... Traced..... Checked <u>DK</u>	Date	Approved by..... Title..... Title..... Sheet No. of..... Drawing No.
---	------	--



STEEL SCHEDULE

RISER DIA. IN.	BAR SIZE	MARK	TYPE	NO. REQ'D.	LENGTH FT.-IN.	TOTAL LENGTH FT.-IN.	TOTAL WT. LB.	C IN.	L FT.-IN.
42	4	1	STR.	12	5-0	60-0	40	3	5-6

TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY
CONCRETE	CU.YD.	1.2
REINFORCING STEEL	LB.	40

NOTE: Pipe shall be corrugated metal with vinyl coat.

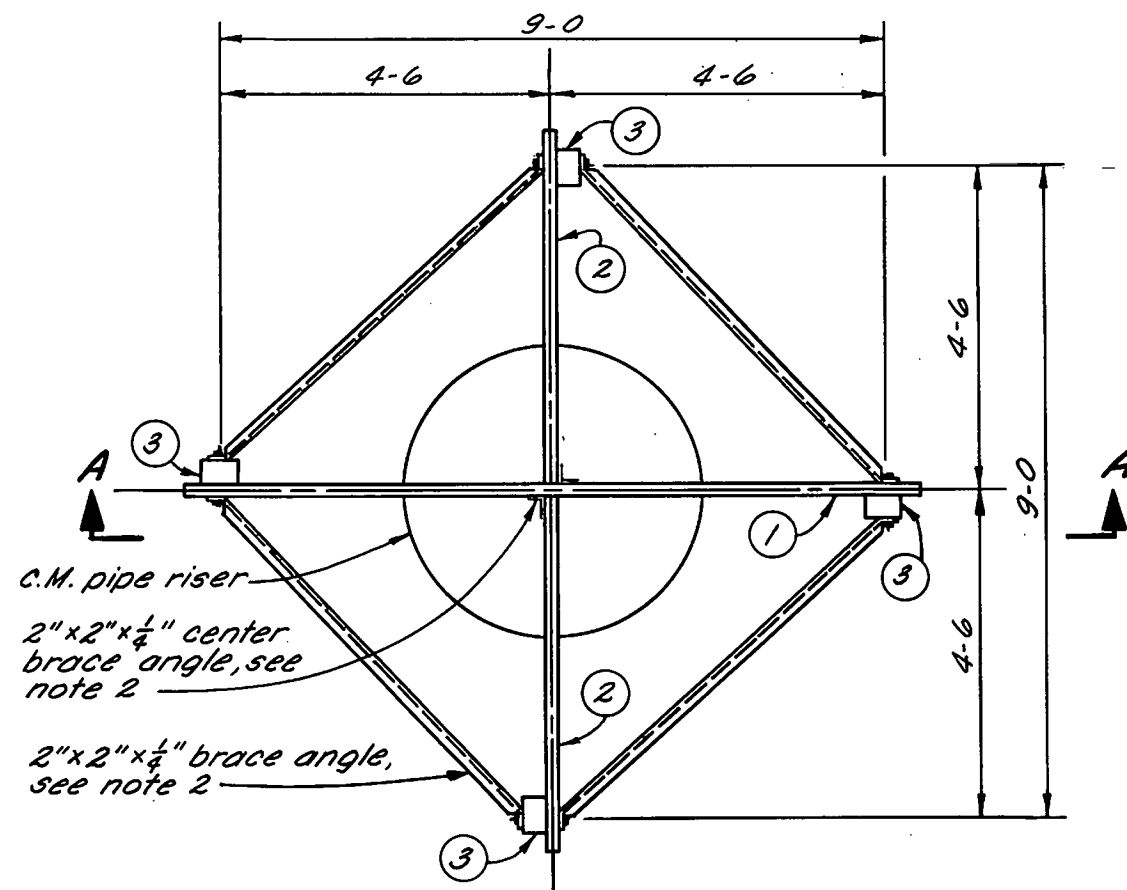
Pipe wall thickness shall be 12 gage for riser and 16 gage for barrel.

C.M. PIPE RISER WITH FABRICATED TEE

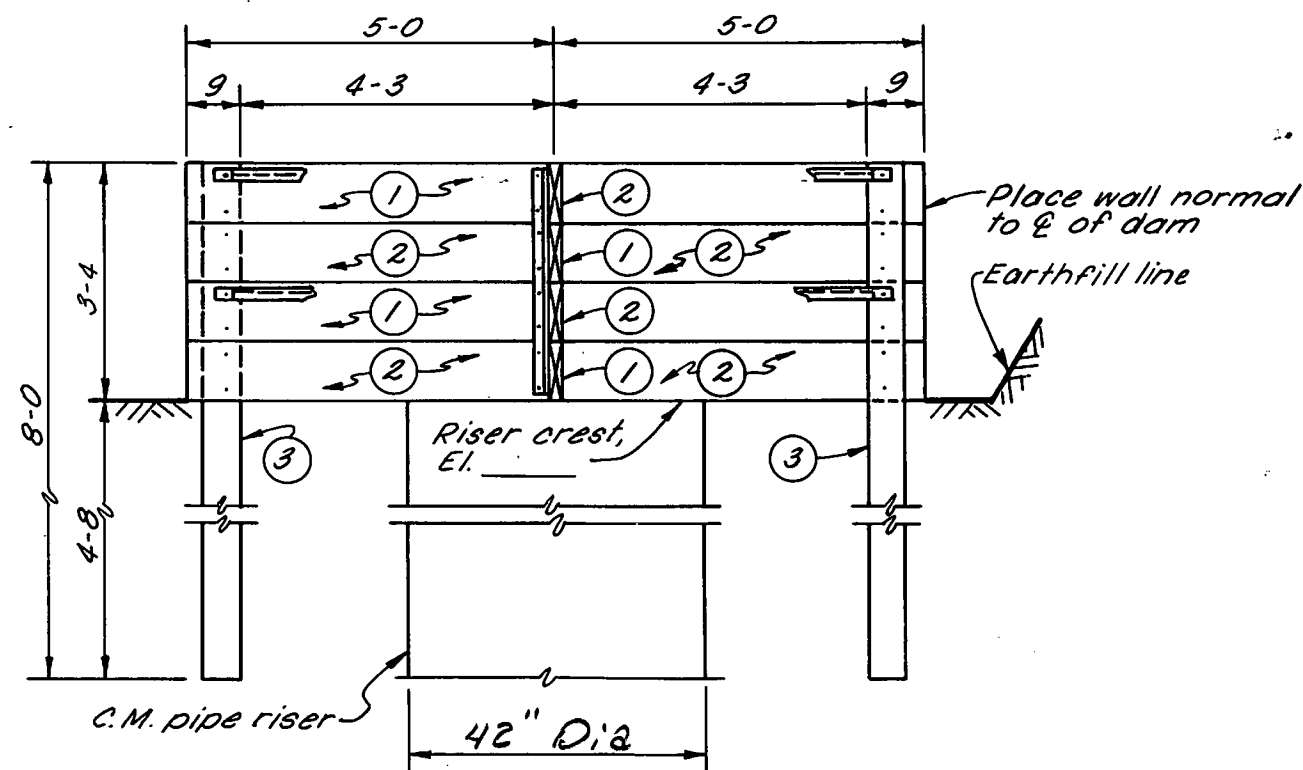
OPERATOR: Rose Ranch
 CONSERVATION DISTRICT: Stanley Co.

U. S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE

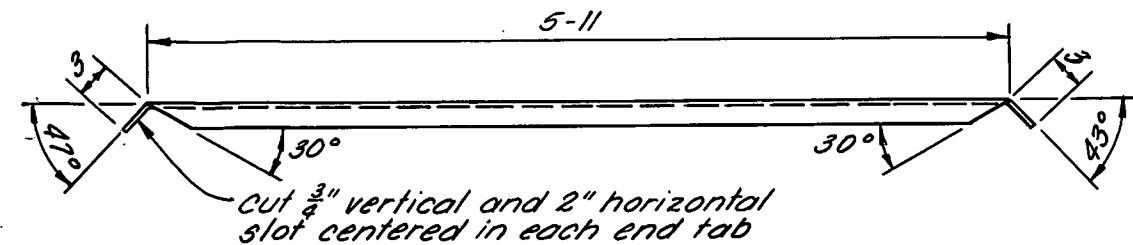
Dated 5-92
 Designed K. Paulsen
 Drawn DR
 Traced DR
 Checked _____
 Approved by _____
 Title _____
 Title _____
 Sheet _____
 Drawing No. _____



PLAN VIEW



SECTIONAL ELEVATION A-A



PLAN VIEW OF BRACE ANGLE

TABLE OF QUANTITIES

ITEM	MARK	NO. REQ'D.	QUANTITY
2" X 10" X 10' PRESSURE TREATED LUMBER	1	4	67 BD. FT.
2" X 10" X 4'-11" PRESSURE TREATED LUMBER	2	8	66 BD. FT.
4" X 6" X 8' PRESSURE TREATED POST	3	4	64 BD. FT.
2" X 2" X 1/4" X 6'-5" STEEL ANGLE		8	164 LB.
2" X 2" X 1/4" X 3'-2" STEEL ANGLE		2	20 LB.
5/8" X 8" STEEL BOLTS, NUTS, 2 WASHERS		32	32 SETS
1/2" X 3" STEEL BOLTS, NUTS, 2 WASHERS		32	32 SETS

NOTES:

1. TO 4" X 6" POSTS (4 REQUIRED) BOLT 2" X 10" BOARDS USING TWO 5/8" X 8" BOLTS PER 2" X 10" BOARD. DO NOT PLACE BOLTS CLOSER THAN 1 1/2" FROM EDGE OF BOARD.
2. FOR CENTER BRACE ANGLES DRILL 8 - 9/16" HOLES 5/8" FROM OUTER EDGE OF EACH LEG OF EACH ANGLE AND CENTERED 5 1/4" APART ALONG THE LEG.
3. ATTACH BRACE ANGLES TO TOP BOLT ON TOP 2" X 10" BOARD AND TO TOP BOLT ON NEXT TO BOTTOM BOARD.

TRASH RACK AND BAFFLE
FOR RISER DIA. 36" THRU 60"

OPERATOR: Rose Ranch
CONSERVATION DISTRICT: Stanley Co.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed K. Paulsen Date 5-92 Approved by _____
Drawn _____ Title _____
Traced _____ Title _____
Checked DK No. _____ Drawing No. _____
of _____

JOB PLAN NO. 6.4

5.N-29,073.6-40

PES Review
Rose Dam
Water Permit Application #2259-2

TGS 3/2/93

Top of Dam = 100 - 116.5 Ac.-Ft.
P. Spway = 93 - 37 Ac.-Ft.
Znd. Spway = 97 - 67 Ac.-Ft.
O/S Toe = 81

Dam Height = 19 ft.
Class A (Cat. 3) Dam

$$16 \times 67 = 1072 < 3000$$

∴ 25 yr Kvast minimum

$$DA = 825 \text{ Ac.} = 1.29 \text{ mi.}^2$$

$$S_i = 1.76$$

$$S = 80' / \text{mile}$$

From USGS "Techniques for Est. Flood Peaks, Volumes
Hydrographs on Small Streams in SD"

$$Q_{25} = 83.4 A^{.65} S_i^{.46} S^{-.72}$$

$$= 83.4 (1.29)^{.65} 80^{.46} (1.76)^{-.72}$$

$$= 83.4 (1.1651) (6.8764) (0.6656)$$

$$Q_{25} = 445 \text{ cfs}$$

$$Q_{100} = 132 A^{.65} S_i^{.46} S^{-.67}$$

$$= 132 (1.29)^{.65} 80^{.46} (1.76)^{-.67}$$

$$= 132 (1.18) (7.5062) (0.6847)$$

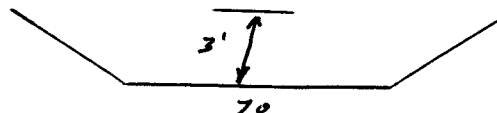
$$Q_{100} = 800 \text{ cfs}$$

Znd Spillway = 70' wide w/ 3' head

$$Q = CLH^{3/2}$$

$$= 2.6 (70) (3)^{1.5}$$

$$= 945 \text{ cfs OK}$$



SCS Annual Yield 50% chance

Section 74:02:08:09

1. Topo Map - OK
2. Dam Axis Profile - OK
3. Max. X-sec. - OK
4. Area-Capacity Curve - OK
5. Outlet Drawings - OK
6. Spillway Curve - OK
7. Spillway Drawing - OK
8. Specs. - OK
9. EPP - NA

Use Soil Type D
CN = 84
DA = 825 acres
Isoqram #2

Use 1.0 Ac.-Inches/Acre

$$825 \times 1 = 825 \text{ Ac.-Inches}$$

$$825 / 12 = 69 \text{ Ac.-Ft.}$$

UNITED STATES
DEPARTMENT OF
AGRICULTURE

SOIL
CONSERVATION
SERVICE

316 SOUTH COTEAU
PIERRE, SD 57501
PHONE 224-1694

August 25, 1992

Attn: Tim Schaal
Division of Water Rights
Joe Foss Building
523 East Capitol
Pierre, SD 57501

RE: Rose Ranch Impoundment Risk Assessment

Mr. Schaal,

The Soil Conservation Service encourages your support and approval for the planned impoundment on the Rose Ranch that is to be located in NE1/4, Sec 34-8-26 of Stanley County. The impoundment has been designed by registered engineers and shall be constructed to meet USDA Soil Conservation Service standards. The pond shall be used for livestock water and shall store 68 acre feet of water if filled to capacity.

It is classified as a low hazard Class 'A' dam by the SCS being located in a rural pasture where failure would not damage any buildings, roads, utilities or other development. The downstream area is all pasture land with Lake Oahe being located approximately five miles away via channel flow through Sansarc Creek.

If you have any questions concerning this impoundment, please contact this office at your convenience.

Sincerely,

Lowell P. Noeske
District Conservationist

CC. Bob Rose, Hayes
David Konechne, SCS, Pierre



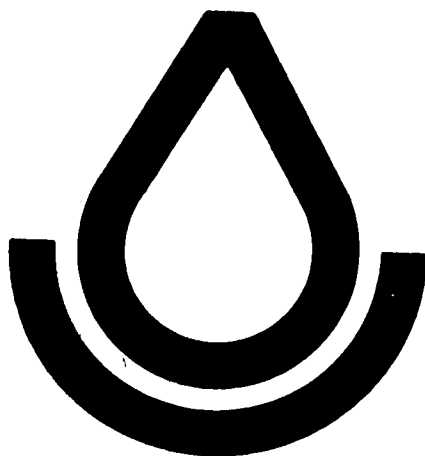
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service

[illegible]

CONSTRUCTION SPECIFICATIONS

for

Rose Ranch
Grade Stabilization



Prepared by:

USDA, SOIL CONSERVATION SERVICE

Pierre, So. Dak

Assisting:

Stanley Co. Conservation District

CHECKLIST

SOUTH DAKOTA CONSTRUCTION AND MATERIAL SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

Check Column	Specification No. SD-	Title
	1	Clearing 6/82
	2	Clearing and Grubbing 6/82
	3	Structure Removal 6/82
✓	4	Stripping 6/82
	5	Excavation 6/82
	6	Excavated Ponds (Dugouts) 6/82
	7A	Earth Fill - Class A - (Controlled Compaction) 6/82
✓	7S	Earth Fill - Class S - (Method Type Compaction) 6/82
	7U	Earth Fill - Class U - (Uncompacted) 8/71
	8	Rock Riprap and Bedding 6/82
	9	Drain Fill and Filter 6/82
	10	Salvaging and Spreading Topsoil 6/82
	11	
	12A	Concrete (Class 3500) 6/82
✓	12B	Concrete for Minor Structures (less than 5 c.y.) 6/82
	13	Steel Reinforcement 8/71
	14	
✓	15	Corrugated Metal Pipe Conduits 11/87
	16	Timber Fabrication and Installation 7/77
	17	Metal Fabrication and Installation 11/87
	18	Wire Mesh Gabions 6/82
	19	

CONSTRUCTION SPECIFICATIONS

Check Column	Specification No. SD-	Title
	20	Pipeline-Plastic (Irrigation) 6/82
	20A	Pipeline-Plastic (Stockwater and/or Domestic) 6/82
	21	Steel Pipelines 6/82
	22	Concrete Pipelines 6/82
	23	Asbestos Cement Pipelines 8/71
	24	Land Leveling 11/77
	25	Diversion 6/82
	26	Terraces 6/82
	27	Waterway Improvement 8/71
	28	Seeding (Requires Specific Site Recommendations) 8/71
	29	Sodding (Requires Specific Site Recommendations) 8/71
	30	Fencing 6/82
✓	31	Cathodic Protection 11/79
	32	Well 8/86
	33	Mulch Blankets and Nets 10/86
		MATERIAL SPECIFICATIONS
	50	Zinc-Coated Iron or Steel Corrugated Pipe 8/71
	51	Aluminum Corrugated Pipe 8/71
	52	Steel Pipe and Fittings 8/71
	53	Concrete Irrigation Pipe, Drainage Pipe, and Drain Tile 10/75
	54	Asbestos-Cement Pipe 6/82
	55	Plastic Pipe 6/82

CONSTRUCTION SPECIFICATION

SD-4 STRIPPING

4.1 SCOPE

The work shall consist of removing topsoil and other undesirable materials from borrow areas and foundations of structures and earth fills.

4.2 GENERAL

The stripping excavation shall extend to a depth sufficient to expose subsoil reasonably free of roots and other perishable material. Excavated earth material deemed satisfactory by the technician shall be used for earth fill. All waste material shall be disposed of in areas shown on the drawings or as directed by the technician. Stripped material suitable for topsoil shall be stockpiled and respread over disturbed areas as directed by the technician.

4.3 STRIPPING FOUNDATIONS

Stripping excavation shall extend to consolidated subsoil and shall be to reasonably smooth surfaces free of unconsolidated or loose soil. Unless otherwise shown on the drawings, foundation slopes shall be excavated to one to one, or flatter slopes.

4.4 STRIPPING BORROW AREAS

The areas from which borrow is to be taken shall be stripped to sufficient depth to expose material suitable for the earth fill.

CONSTRUCTION SPECIFICATION

SD-7S EARTH FILL-CLASS S

7S.1 SCOPE

The work shall consist of the construction of compacted earth fills where the amount of compaction is to be controlled by a method type of specification.

7S.2 MATERIALS

All fill materials shall be obtained from required excavations and designated borrow areas. The selection, blending, routing and disposition of materials shall be subject to approval by the technician.

Fill materials shall not contain frozen material, sod, brush, roots, or other perishable materials, or rocks larger than 8 inches in diameter. Fill shall not be placed on a frozen surface.

7S.3 FOUNDATION PREPARATION

After stripping (see stripping specification), the foundation shall be scarified or plowed to a minimum depth of 4 inches. The entire foundation area shall then be compacted by the process used on the fill.

7S.4 PLACEMENT

All foundation excavations and/or preparation shall be completed before placing fill. The fill shall be placed such that the distribution of materials is essentially uniform throughout the entire fill and is free from lenses, pockets, streaks, or layers of materials differing substantially from surrounding material.

Fill, adjacent to structures, shall be placed in a manner that will prevent damage to the structures and allow the structures to assume the backfill loads gradually and uniformly. Equipment weighing more than 400 pounds shall not be operated within 2 feet of any structure.

Fill shall be placed in approximately equal horizontal layers. Fill layer thicknesses shall not exceed 9 inches for machine compaction or 4 inches for hand compaction (including hand directed power tampers adjacent to structures).

7S.5 MOISTURE CONTENT

The fill material shall have a moisture content that when kneaded in the hand will form a ball which does not easily crumble when struck sharply with a pencil or which does not crumble when pressed between the hands.

If the soil is too wet, it will yield free water when kneaded in the hand. The fill may have to be wetted or dried to achieve proper moisture control.

7S.6 COMPACTION (CLASS S)

The fill shall be compacted by one of the following methods.

- a. By routing the hauling and spreading equipment such that all points of the fill is traversed by at least one tread track of the loaded equipment, parallel to the centerline of the fill.
- b. By at least two passes of a tamping (sheepfoot) roller weighing at least 100 pounds per square inch of bearing area.

Fill adjacent to structures shall be compacted to a density equivalent to that of the surrounding fill by means of hand tamping or manually directed power tampers or plate vibrators. Heavy equipment shall not be operated within 2 feet of any structure.

Compaction of fill adjacent to concrete structures shall not be started until the following time limits have elapsed after placement of the concrete.

<u>Structure</u>	<u>Time Interval</u>
Walls and counterforts	14 days
Conduits and Spillway Risers (cast in place)	14 days
Conduits, precast, cradled	2 days
Conduits, precast, bedded	1 day
Anti-seep Collars and Cantilever pipe props	3 days

CONSTRUCTION SPECIFICATION

SD-15 CORRUGATED METAL PIPE CONDUITS

15.1 SCOPE

The work shall consist of furnishing and placing circular, arched, or eclipitcal corrugated metal pipe and the necessary fittings as shown on the plans.

15.2 MATERIALS

Pipe and fittings shall conform to the requirements of Material Specification SD-50 or Material Specification SD-51, whichever is specified. When specified, caulked seam corrugated metal pipe shall conform to the following additional requirements:

- (1) Caulked seam corrugated metal pipe shall have all circumferential and horizontal seams caulked with an asphalt compound before riveting. This shall be accomplished by applying a uniform bead ($\frac{1}{4}$ inch minimum diameter) of the asphalt compound to the inner lap surface before riveting such that when the rivets are in place all voids are filled and a coating of asphalt is between the lap surfaces.
- (2) The asphalt compound shall consist of an asphalt base combined with asbestos fiber and other inert filler material to form a heavy-bodied compound that will not sag or run out of the seam. The compound should contain 63 to 68 percent solids by weight. It shall be similar in type and equal in quality to Trumbull 5X Asphalt Mastic, knife grade, as manufactured by the Trumbull Asphalt Company of Delaware.

15.3 HANDLING THE PIPE

The Contractor shall furnish such equipment as is necessary to place the pipe without damaging the pipe or coatings. The pipe shall be transported and handled in such a manner as to prevent bruising, scaling, or breaking of the zinc, bituminous or plastic coating.

Whenever the coating of zinc coated pipe is damaged in any individual area larger than 12 square inches, or if more than 0.2 percent of the total surface area of the pipe is damaged, the section will be rejected.

Whenever the coating on bituminous or plastic coated pipe is damaged in any individual area that exceeds 36 square inches or when the total area of breaks exceeds 0.5 percent of the total surface area of the pipe, the section will be rejected.

15.4 REPAIR OF DAMAGED COATINGS

Breaks, scuffs, or other damage to the various coatings shall be repaired as follows:

- (1) Zinc Coating - by thoroughly wire brushing and cleaning the damaged area with solvent, and then painting two coats of one of the following paints:
 - a. Zinc Dust - Zinc Oxide Primer conforming to Federal Specification TT-P-641, Type III.
 - b. Zinc Dust Chlorinated Rubber conforming to Federal Specification TT-P-1046a.
 - c. Zinc Dust Paint conforming to Military Specification MIL-P-21035.
 - d. Epoxy-Polyamide Paint conforming to Defense Specification DOD-P-15145B.
- (2) Bituminous Coating - by the application of two coats of hot asphaltic paint or a coating of cold-applied bituminous mastic. The repair coating shall be at least 0.05 inches thick after hardening and shall bond securely and permanently to the pipe. The material shall meet the physical requirements of the original coating.
- (3) Plastic or Vinyl Coating - by using a plastic coating similar and equal to Scotch-Clad Protective Coating 1706, manufactured by 3M Co., 3M Center, St. Paul, Minnesota. Surfaces to be coated must be clean and dry. A 10 mil coating thickness is required. If the repair coating thickness is not measured, four coats shall be applied allowing 30 minutes drying time between coats.

15.5 LAYING AND BEDDING THE PIPE

Unless otherwise specified, the pipe shall be installed in accordance with the manufacturer's recommendations. The pipe shall be laid with the outside laps of circumferential joints pointing upstream and with longitudinal laps at the sides at about the vertical midheight of the pipe. Field welding on corrugated galvanized iron or steel pipe will not be permitted. Unless otherwise specified, the pipe sections shall be joined with water-tight coupling bands, with a minimum width of 12 inches, or flanges for a flange-type connection. The area between pipe and coupling band shall be coated with either an asphalt cement to insure a water-tight joint or a rubber neoprene gasket 3/8 inch thick and as wide as the connecting band $\pm$ 1 inch.

The trench or foundation width in or on which the pipe will be laid should be at least: (a) 2 times the pipe diameter, or (b) the pipe diameter plus 2 feet, whichever is the greater.

Pipe should be laid on a moist, compacted foundation (not wet nor hard and dry). Just before the pipe is laid, spread a 2-to 3-inch layer of moist loose soil for the pipe to be placed on. The pipe should make uniform contact with the soil along its entire length.

Perforated pipe shall be laid with perforation down and oriented symmetrically about a vertical centerline. Perforations shall be clear of any obstructions at the time the pipe is laid.

15.6 BACKFILLING

The pipe shall be loaded sufficiently during backfilling around the side to prevent its being lifted from the bedding.

Backfill around the pipe shall be placed in layers not more than 4 inches thick before compaction. Each layer of backfill shall be compacted with power tampers or hand tamping to the same density requirements as specified for the adjacent embankment. Backfill over and around the pipe shall be brought up uniformly on all sides and shall extend a minimum of 2 feet over the pipe before earth embankment with earth moving equipment over the pipe is started. Special care shall be taken not to disturb the grade and alignment during backfill operations.

CONSTRUCTION SPECIFICATION

SD-12B CONCRETE FOR MINOR STRUCTURES
(FOR STRUCTURES UP TO 10 C.Y.)

12B.1 SCOPE

The work shall consist of proportioning, forming, placing, finishing, and curing portland cement concrete.

Acceptance:

The acceptance or rejection of concrete made under this specification will depend upon adherence to the procedures set forth herein, and the appearance of the finished structure.

12B.2 MATERIALS

Portland Cement shall be Type II or Type IIA Portland Cement. Cement that is partially hydrated or otherwise damaged shall not be used.

Fine Aggregate is defined as all material which will pass a $\frac{1}{4}$ -inch screen. Fine aggregate shall compose between 35 and 45 percent of the total aggregate and shall not contain more than 1 percent clay lumps or more than 4 percent finer than a No. 200 sieve. Coal in fine aggregate shall not exceed $\frac{1}{2}$ of 1 percent.

Coarse Aggregate is defined as all material larger than $\frac{1}{4}$ inch. Maximum size aggregate shall not exceed:

- 1 inch - Concrete thickness of 4 inches or less
- $1\frac{1}{2}$ inch - Concrete thickness of 4 inches or more

Coarse aggregate shall compose between 55 and 65 percent of total aggregate and shall not contain more than $\frac{1}{4}$ of 1 percent of clay lumps or more than 1 percent of material finer than No. 200 sieve. Coal shall not exceed one percent.

Mixed fine and coarse aggregate or pit-run aggregate may be used provided the requirements stated above are met.

Water shall be clean and free of harmful chemicals (suitable for drinking).

12B.3 DESIGN OF CONCRETE MIX

The contractor or person in charge of construction shall be responsible for designing a high quality concrete mix conforming to this specification.

The mix shall contain less than 6 gallons of water per bag of cement, and at least 6 bags of cement per cubic yard of concrete. The air-entrainment shall be between 4 and 7 percent by volume, and the slump after mixture shall be between 2 and 4 inches.

The following table is recommended as a guide for developing a satisfactory mix to give 3000 psi compressive strength for air-entrained concrete.

Max. Size Aggregate	Gal. Water per sack of cement	% of Fine Aggregate	Sacks Cement per cu. yd.	Pounds Fine Aggregate per sack cement	Pounds Coarse Aggregate per sack cement
1"	6.0	40	6.0	190-200	300-310
1½"	6.0	35	6.0	180-190	330-340

Ready Mixed concrete may be used provided it meets the requirements of these specifications. Upon request the vendor shall provide the owner with a signed delivery ticket giving the quantities of concrete, cement, fine aggregate, coarse aggregate and water contained in the batch.

Measurements of materials shall be by weight where suitable scales are available. Where suitable scales are not available, volume measurement may be used provided volume-weight relationships are carefully determined. Calcium chloride or other accelerators or anti-freeze compounds shall not be used.

Measurements (by weight) of materials in the mix shall be made available to the technician.

12B.4 FORMS FOR CONCRETE

Forms shall be made of wood, plywood, steel or other approved material. The type, size, shape, quality and strength of forms will be subject to approval by the technician.

All forms shall be true to line and grade, mortar tight, and rigid enough to prevent bulging or displacement. Tolerances will be close enough to assure that the structure appears and performs well.

All forms shall be removed from the concrete. Forming shall not be embedded in the concrete.

12B.5 PLACING CONCRETE

Concrete shall be placed in final position within one and one-half hours after mixing with cement.

Concrete shall be consolidated by hand spading and tamping or by mechanical vibration.

All concrete placed on earth shall be placed on clean damp surface, free of frost, ice, or running water. Concrete shall not be dropped more than 5 feet vertically unless suitable equipment is used to prevent segregation.

Uniformed surfaces (excluding slip form concrete) exposed in the completed work shall have a wood float finish. Exposed concrete edges shall be chamfered or finished with molding tools.

Concrete shall be placed at air temperatures between 40°F. and 80°F. unless special measures are taken to protect the concrete. Concrete shall be protected from freezing for 7 days after placement.

12B.6 CURING CONCRETE

All concrete shall be cured by keeping all exposed surfaces wet for 7 days or by applying a spray type curing compound to exposed concrete surfaces immediately after the free water has disappeared after pouring.

12B.7 DEFECTIVE CONCRETE

Honey combed areas and other voids in concrete will be promptly repaired with mortar patching immediately upon discovery.

Concrete subjected to damage and/or other violations of this specification will be rejected.

CONSTRUCTION SPECIFICATION

SD-31 CATHODIC PROTECTION

31.1 SCOPE

The work shall consist of furnishing and installing all materials necessary to provide cathodic protection to steel pipelines, corrugated metal pipe conduits, and other buried metal structures.

31.2 MATERIALS

a. Anodes

The anodes shall be of the type and size specified. They shall be commercially cast and pre-packaged. Each anode shall have a full length core with a #12 AWG or larger insulated copper lead wire attached.

Zinc anodes shall conform to the requirements of ASTM B418, Type II composition. Unless otherwise specified, the packaged backfill shall be 20-50 percent bentonite and 50-80 percent gypsum.

Magnesium anodes shall have a chemical composition of 5-7 percent aluminum, 2-4 percent zinc, 0.15-0.25 percent manganese, a maximum of 0.7 percent other varied elements, and the balance magnesium. The packaged backfill shall be approximately 75 percent hydrated gypsum, 20 percent bentonite, and 5 percent sodium sulfate.

b. Wire

The wire for header cables, anode leads, and joint bridging shall be a single conductor, stranded, plain annealed copper with a black, high-molecular weight polyethylene insulation and jacket. The polyethylene shall conform to ASTM Designation D1248, Type I, Class C, Grade 5.

Wire for header cables and anode leads shall be #12 AWG copper or larger. Wire for bridging joints shall be #6 AWG copper or larger.

c. Powder Weld Process

The welder and powder charge shall be of the size, type, and composition recommended by the manufacturer for permanently fastening copper wire to copper wire or to steel or cast iron surfaces. The resulting weld shall be a permanent, low resistance copper connection.

d. Silver Solder Process

The silver solder process shall be for very low voltage electrical connections. Manufacturer's instructions shall be followed.

31.3 INSTALLING ANODES

Anodes shall be placed as shown on the drawings. They may be placed either horizontally or vertically and shall be deep enough to have at least three (3) feet of earth cover. Anodes shall not be placed in fill areas, and magnesium anodes must be placed a minimum distance of 10 feet from the pipeline or structure.

Anodes shall be bedded in moist fine grained soils such as CH, CL, MH, or ML. In sandy and gravelly areas, fine materials must be imported for bedding and for covering the anodes to a depth of approximately 6 inches. The packaged anodes and the fine textured soil used for bedding and backfill shall be thoroughly wetted. Compaction of the backfill shall be to the density of the surrounding material.

If the anode cannot be placed in a low or wet location, sand or gravel shall be used as backfill above the fine grained fill around and over the anode. This backfill shall be left at least 6 inches lower than the surrounding area and the surrounding area shaped to direct runoff to the anode.

31.4 ATTACHING THE ANODE

Unless otherwise specified the lead wire from the anode, or from the header wire for multiple anode installations, shall be attached to the pipeline or structure by a powder welding process. The area of damaged pipe or structure coating and the weld shall be covered with a coating equal in quality to the specified original coating.

Unless otherwise specified, the lead wires from anodes shall be connected to the header wire by a powder weld, brazed, or silver soldered. The connection shall be made waterproof and tightly wrapped to a minimum thickness of 24 mils of vinyl plastic electrical tape. The connection shall be thoroughly cleaned to remove all foreign material and moisture before wrapping.

31.5 TESTING STATIONS

A testing station shall be located and installed as shown on the drawings or as otherwise specified. All connections shall be as specified and shall be electrically insulated.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

March 3, 1993

Lowell P. Noeske
District Conservationist
USDA Soil Conservation Service
316 South Coteau
Pierre, SD 57501

Dear Mr. Noeske:

We have reviewed the plans and specifications for the Rose Ranch Dam located in the SW 1/4 NE 1/4 of Section 34-T8N-R26E in Stanley County. The plans and specifications as submitted are approved. However, construction of the project may not begin until Water Permit Application No. 2259-2 is approved.

Our review was to determine compliance with the requirements of the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release Mr. Rose, as owner of the dam, from the responsibility for operating and maintaining the dam in good repair to assure the safety of the dam.

The Rose Ranch Dam will be classified as a small size Category 3 dam with a dam height of 19 feet and a normal storage capacity of 37 acre-feet and a maximum storage capacity of 116.5 acre-feet.

If you have any questions, please feel free to contact me.

Sincerely,

Gale N. Selken, P.E.
Natural Resources Engineer IV
for John Hatch, Chief Engineer
Water Rights Division
605 773-3352

cc: Robert Rose, Hayes

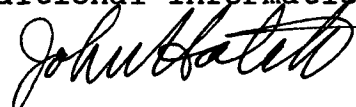
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2259-2, Rose Ranch

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Environment and Natural Resources concerning Water Permit Application No. 2259-2, Rose Ranch, c/o Bob Rose, SR 68 Box 385, Hayes, SD 57537.

The Chief Engineer is recommending APPROVAL of Application No. 2259-2 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) in the public interest with the following qualifications:

1. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.
2. Approval of Water Permit No. 2259-2 authorizes storage of up to 37 acre-feet annually.

See report on application for additional information.



JOHN HATCH, Chief Engineer
March 5, 1993

REPORT ON
WATER PERMIT APPLICATION NO. 2259-2
ROSE RANCH
March 3, 1993

Water Permit Application No. 2259-2 has been filed by Rose Ranch to impound 37 acre-feet of water in a dam. The dam is to be located in the SW 1/4 NE 1/4 of Section 34-T8N-R26E, in Stanley County. The dam will be used to provide livestock water and erosion control.

Discussion:

The Rose Ranch Dam will be classified as a small size Category 3, Low Hazard dam. The dam has been designed by the Soil Conservation Service (SCS). The plans and specifications for the dam have been reviewed and approved.

The dam will be 19 feet high with a normal storage capacity of 37 acre-feet with a reservoir level at the spillway elevation, and a maximum storage capacity of 116.5 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 25 year frequency event.

The Rose Ranch Dam is designed to have a 70 foot wide earthcut emergency spillway with 3 feet of head. The dam will have a drainage area of 1.29 square miles (825 acres). A 25 year frequency event for this drainage area produces a peak runoff of 445 cfs. A 100 year frequency event produces a peak runoff of 800 cfs. The 70 foot wide emergency spillway will be capable of passing 945 cfs.

The annual yield for this drainage with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be approximately 69 acre-feet.

The Rose Ranch Dam will be located on a tributary to Sansarc Creek approximately 5 miles above the confluence of Sansarc Creek and the Cheyenne River/Lake Oahe. There are no existing Water Permits/Rights on Sansarc Creek or this tributary below the proposed dam.

Conclusions:

1. Water Permit Application No. 2259-2 should be approved since unappropriated water is available and approval will not adversely affect existing Water Permits/Rights.

Page 2

Application No. 2259-2

2. If approved, the low flow bypass requirement for downstream domestic use should be a qualification on Water Permit Application No. 2259-2.

Timothy G. Schaal 

Timothy G. Schaal, P.E.
Natural Resources Engineer III

Approved by:

Gale N. Selken

Gale N. Selken, P.E.
Natural Resources Engineer IV



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

March 11, 1993

Bob Rose
Rose Ranch
SR 68 Box 385
Hayes, SD 57537

Dear Mr. Rose:

Water Permit Application No. 2259-2 for livestock and erosion control use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Capital Journal printed at Pierre, SD (Ph # 224-7301). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.



March 11, 1993

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

Capital Journal
PO Box 878
Pierre, SD 57501

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 2259-2 to be published twice. Please publish the first notice on March 18, 1993, with the second publication 7 days later.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you make the first publication. Please BILL the APPLICANT for the cost of publication. The APPLICANT is Rose Ranch, SR 68 Box 385, Hayes, SD 57537 (Ph # 567-3374).

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

Eric Gronlund

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----
FIRST TRANSMITTAL NOTICE

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of
Hearing to Appropriate Water by Application No. _____ which was first
published in our issue of _____. ENCLOSED IS A COPY OF THIS
FIRST PUBLICATION.

TO: Eric Gronlund
Water Rights Division
Joe Foss Building
Pierre SD 57501-3181

Name

Newspaper

Instruction to Newspaper - Publish first Notice on March 18, 1993, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 2259-2 to Appropriate Water

Notice is given that Rose Ranch, Bob Rose, SR 68 Box 385, Hayes, SD 57537 has filed an application for a water permit to impound 37 acre-feet of water by constructing a dam. The dam site is to be located in the SW 1/4 NE 1/4 Section 34 with water impounded in the SW 1/4 NE 1/4, N 1/2 SE 1/4 Section 34; all in T8N-R26E. Water is to be used for livestock watering and erosion control.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2259-2 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. Unless a petition is filed opposing the application or the applicant files a petition contesting the chief engineer's recommendation, the Water Management Board will NOT CONDUCT a HEARING to consider this application and the chief engineer will issue the permit as recommended. Petitions filed in support of the application will NOT require the Board to hear the application.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by April 5, 1993. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

For purposes of publishing 1) the notice of hearing on Application No. 2259-2 and 2) the chief engineer's recommendation, a meeting at the Division of Water Rights office to hear this application is scheduled for April 14, 1993, at 9:00 am in Room 413, Joe Foss Building, 523 E Capitol, Pierre SD. If this application is opposed or the recommendation is contested, the April 14, 1993, hearing date will be rescheduled for a regularly scheduled Board meeting. Notice of the time and place of the rescheduled hearing before the Board will be given by First Class Mail to the applicant and persons filing petitions. Anyone not filing a petition, but interested in attending the hearing, may contact the Division of Water Rights to confirm a hearing date and location. The April 14, 1993, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by April 5, 1993.

If a hearing is held, the Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by April 5, 1993, at the above Water Rights Division address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Robert E. Roberts, Secretary, Department of Environment and Natural Resources.

NOTICE OF HEARING

on Application No. 2259-2 to
Appropriate Water

Notice is given that Rose Ranch, Bob Rose, SR 68 Box 385, Hayes, S.D. 57537 has filed an application for a water permit to impound 37 acre-feet of water by constructing a dam. The dam site is to be located in the SW 1/4 NE 1/4 Section 34 with water impounded in the SW 1/4 NE 1/4, N 1/2 SE 1/4 Section 34; all in T8N-R26E. Water is to be used for livestock watering and erosion control.

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Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E. Capitol, Pierre, S.D. 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by April 5, 1993. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

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This application is made pursuant to SDCL 46-1-1 through 46-1-9, 46-1-12 through 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 through 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 through 46-5-11, 46-5-13 through 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; and Board Rules ARSD 74:02:01:01 through 74:02:01:15.

Robert E. Roberts, Secretary
Department of Environment
and Natural Resources

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)

County of Hughes) ssI, Peggy Warner

certify that the attached printed Notice was

taken from the

Capital Journal
printed and published in PierreCounty of Hughes and State ofSouth Dakota. The notice was published in
the newspaper on the following two dates:March 18, 1993
March 25, 1993Cost of Printing: \$70.38Peggy Warner
(Signature)Legal Ad Representative
(Title)March 26, 1993
(Date Signed)



MAY 19 1993

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

Bob Rose
Rose Ranch
SR 68 Box 385
Hayes, SD 57537

Dear Mr. Rose:

Enclosed is Water Permit No. 2259-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosures

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period - i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

July 24, 2000

2259-2

Rose Ranch
%Bob Rose
SR 68, Box 385
Hayes, SD 57537

Dear Mr. Rose:

On August 9, 1999, the investigation of your water use system, including the extent of application of water to beneficial use, as developed under Water Permit No. 2259-2, was completed by Timothy G. Schaal, a staff engineer with our program. Your final water right document, the water license, can now be issued.

State law requires that we charge a \$50.00 fee for the investigation and issuance of the water license. Upon receipt of the \$50.00 fee from you, we will complete processing your water license. The check or money order for the fee should be made payable to the "Water Rights Program".

Your licensed water right will be similar to a property right that can not be lost as long as the water use continues and you abide by the permit requirements.

If you have any questions regarding the water permit, investigation of your water use system or payment of the fee, please contact Genny McMath with our program at (605) 773-3352.

Sincerely,

Cheryl F. Frost
Secretary
Water Rights Program



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

October 13, 2000

REMINDER NOTICE

2259-2

Bob Rose
Rose Ranch
SR 69 Box 385
Hayes, SD 57537

Bob
Dear Mr. Rose:

On July 24, 2000, we advised you that a \$50.00 fee was due for the completed investigation of your Water Permit No. 2249-2. The fee also covers issuance of your water license which is the final document in obtaining and perfecting a water permit.

To date, we have not received the fee and therefore can not issue the water license. Your licensed water right will be similar to a property right that can not be lost as long as the water use continues and you abide by any permit requirements.

If you have any questions regarding the water permit, investigation of your water use system or payment of the fee, please contact Genny McMath with our program at (605) 773-3352. The check or money order for the fee should be made payable to the "Water Rights Program".

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program

CERTIFICATION

I hereby certify that on October 13, 2000, I have personally deposited with the United States mail at Pierre, South Dakota, first class postage, prepaid envelopes containing a Notice dated October 13, 2000, regarding a "Reminder Notice" for payment of fees:

Water Permit No. 2259-2 Bob Rose, Rose Ranch, SR 69 Box 385, Hayes, SD 57537

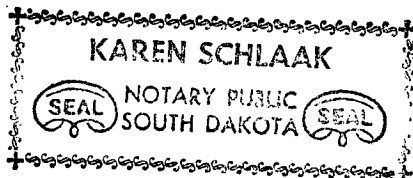
Senay McMath

Genny McMath
Environmental Scientist
Water Right Program

[illegible]

Sworn to, before me, this 16th day of October, 2000.

Karen Schlaak
Karen Schlaak
Notary Public



KAREN SCHLAAK, Notary Public
My Commission Expires
April 1, 2021

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

Nº 416699

q

Pierre, ~~December 1~~ , 2000

RECEIVED OF A H Rose, 1227 E Dakota, Pierre SD 57501
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct
and to put water to beneficial use _____

Fee for Application for Permit No. _____ to Appropriate Water, for Future
Use _____

Fee to retain Future Use Permit No. _____ after period of seven years.

Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water
License No. 2259-2

Fee for Filing Transfer Form _____

Fee for Filing Extension Request _____

Fee for _____

(Any Other Work Provided by Law)

Total

50 00

By

Chief Engineer

Garland E. Eble

K5

Permit No. 2259-2
Missouri River - Water District

Report of Examination of Works and/or Application of Water to Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, August 9, 1999, made a thorough examination of the water use system constructed by Rose Ranch % Bob Rose of SR 68, Box 385 holder of Permit No. 2259-2, bearing the priority of February 2, 1993 authorizing the storage of 37 acre-feet of the waters of runoff for livestock & erosion control purposes, in Stanley County.

Inspection contact & relationship **Bob Rose, owner**
to permit holder, if applicable:

A. Works used to divert the water: 19 ft. high dam with 37 ac-ft storage capacity

Dam Information:

- | | |
|--|--|
| 1) Height to crest <u>19</u> feet | 6) Spillway length <u> </u> feet |
| 2) Height to primary spillway <u>12</u> feet | 7) Spillway width <u>70</u> feet |
| 3) Height to secondary spillway <u>16</u> ft | 8) Approx. storage <u>37</u> ac-ft |
| 4) Crest width <u>12</u> feet | 9) Approx. storage to crest <u>116.5</u> ac-ft |
| 5) Crest length <u>413</u> feet | 10) Date constructed: <u>1993</u> |

Chemigation Equipment: N/A

B. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period N/A
- 3) Exceptions to compliance are: none

The system is in good condition with the point of diversion located as follows: 1850 feet south & 2500 feet west of the NE corner of Sec. 34-T8N-R26 E (SW 1/4 NE 1/4). The works are capable of storing 37 acre-feet of water which is to be used for livestock & erosion control. Water has been put to beneficial use to the maximum extent as follows:

19 ft. high dam with 37 acre-feet storage capacity

and the license should be issued for 37 acre-feet of storage.

All structures, wells and lands on map yes

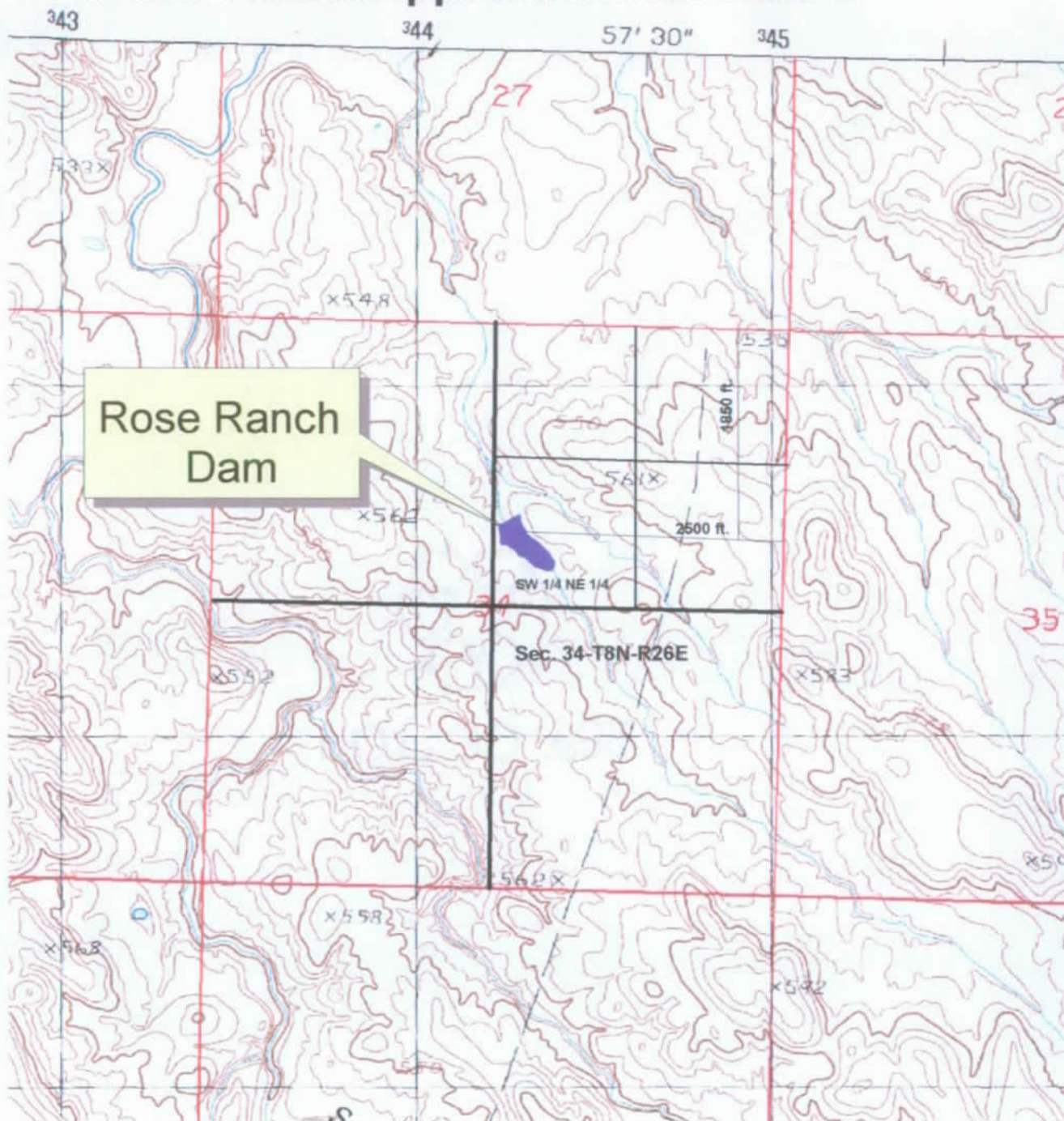
Comments or other permit(s) associated with the project: none


Timothy G. Schaal, P.E.

Natural Resources Engineer III
DENR, Water Rights Program

Date report completed: July 20, 2000

Water Permit Application No. 2259-2



0.5 0 0.5 Miles



South Dakota Department of
Environment and Natural Resources



Protecting South Dakota's Tomorrow... Today

Timothy G. Schaal
Timothy G. Schaal, P.E.
Natural Resources Engineer III
Water Rights Program

July 20, 2000

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2259-2

(1) Rose Ranch, c/o Bob Rose, SR 68 Box 385, Hayes SD 57537 made Application No. 2259-2, February 18, 1993 for a water permit to impound 37 acre-feet of water from runoff, Stanley County, South Dakota for livestock water and erosion control purposes. Permit No. 2259-2, with a priority date of February 18, 1993 was approved April 14, 1993 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before April 14, 1998 and for the application to beneficial use of said water on or before April 14, 2002.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the storage dam and is entitled to impound 37 acre-feet of water for beneficial use with sufficient water annually to maintain the water level to the outlet elevation. The location of the storage dam (spillway) is 1,850 feet south and 2,500 feet west of the northeast corner of Section 34-T8N-R26E (SW ¼ NE ¼).

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 Rose Ranch, c/o Bob Rose, SR 68 Box 385, Hayes SD 57537 the holder and/or owner of Water Right No. 2259-2 is issued a license to appropriate water, the right to impound 37 acre-feet of water from runoff with sufficient water annually to maintain the water level to the outlet elevation with a priority date of February 18, 1993 from the location specified in (2) of this license for livestock water and erosion control. This license is subject to any limitations or qualifications listed in Water Right No. 2259-2 and subject to South Dakota State Law.

Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

DEC 12 2000

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

DEC 12 2000

2259-2

Rose Ranch
c/o Bob Rose
SR 68 Box 385
Hayes SD 57537

Dear Mr. Rose:

Enclosed is Water License No. 2259-2. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 416699 in the amount of \$50.00 which you paid for the investigation and issuance of the Water License.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures